

Serial No. 10/634,992
Attorney Docket No. 103864.139US1

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An automated system for emptying contents of pharmaceutical containers including medications, comprising:

a gripper unit for receiving and holding a pharmaceutical container;

a cutter for cutting at least one of the top, sidewall, and bottom of the pharmaceutical container; and

a rotating unit operable with said gripper unit that rotates at least a portion of said gripper unit to empty the contents of the pharmaceutical container.
2. (Original) The system according to claim 1, further comprising a robot for placing the pharmaceutical container in said gripper unit.
3. (Original) The system according to claim 2, further comprising a conveyor for transporting the pharmaceutical container in proximity to said robot.
4. (Original) The system according to claim 3, further comprising a vision system utilized by said robot to determine the position of the pharmaceutical container on said conveyor.

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5. (Original) The system according to claim 4, wherein when said vision system does not recognize at least one of the size and shape of a pharmaceutical container, the pharmaceutical container is transported off said conveyor.
6. (Original) The system according to claim 5, wherein the bottles transported off of said conveyor are deposited in a bin.
7. (Original) The system according to claim 1, wherein the contents of the pharmaceutical container are emptied into a bulk-up container.
8. (Original) The system according to claim 7, wherein the bulk-up container comprises a substantially uniform sized container to facilitate the automated dispensing of the medications.
9. (Original) The system according to claim 1, wherein said cutter is an ultrasonic cutter.
10. (Original) The system according to claim 3, wherein said cutter comprises a blade that moves in a direction substantially parallel to a belt of said conveyor.
11. (Original) The system according to claim 10, wherein a rodless air cylinder is used to facilitate movement of said cutter.
12. (Original) The system according to claim 1, further comprising an arm that rotates to a first position to receive the cut portion of the pharmaceutical container, and a second position to place the cut portion in a waste repository.

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13. (Original) The system according to claim 12, wherein said arm utilizes a vacuum that retains the cut portion of said pharmaceutical bottle when said arm is in the first position, and the vacuum decreases when said arm is in the second position to effect release of the cut portion.

14. (Original) The system according to claim 13, where the cut portion is released in a scrap bin.

15. (Original) The system according to claim 1, further comprising a scrap chute that receives a portion of the pharmaceutical container subsequent to emptying the contents of the pharmaceutical container.

16. (Original) The system according to claim 15, wherein said scrap chute is in a distal position with respect to said gripper unit prior to emptying the contents of the pharmaceutical container, said scrap chute moving to a proximal position with respect to said gripper unit to receive the portion of the pharmaceutical container held by the gripper unit subsequent to emptying the contents of the pharmaceutical container, said scrap chute returning to said distal position to place the portion of the pharmaceutical container held by said gripper unit in a scrap bin.

17. (Currently Amended) The system according to claim 1, further comprising a sensor system to determine when the contents of the pharmaceutical container are no longer being emptied directly from the pharmaceutical container.

18. (Currently Amended) The system according to claim 17, wherein said sensor system comprises a light emitter and a light receiver, said light emitter providing a light beam that is broken by the contents of the pharmaceutical container

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~~when the contents of the pharmaceutical container are being emptied~~ being emptied
directly from the pharmaceutical container.

19. (Original) The system according to claim 1, wherein said gripper unit comprises first and second interlocking fingers.

20. (Previously Presented) The system according to claim 19, wherein said first and second interlocking fingers are substantially V-shaped.

21. (Original) The system according to claim 19, further comprising a detection system to detect when the pharmaceutical container is no longer being held by said gripper unit.

22. (Original) The system according to claim 21, wherein said detection system comprises a light beam source and reflector, said reflector not sensing the light from said light beam source when the pharmaceutical container is held by said gripper unit.

23. (Original) The system according to claim 21, wherein the pharmaceutical container can be of different shapes and sizes.

24 - 29. (Cancelled)

30. (Currently Amended) An automated system for emptying the contents of pharmaceutical containers, comprising:

means for receiving and holding a pharmaceutical container;

means for cutting at least one of the top, sidewall, and bottom of the
pharmaceutical container;

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means for rotating at least a portion of said means for receiving and holding to empty the contents of the pharmaceutical container.

31. (Original) The system according to claim 30, further comprising means for placing the pharmaceutical container in said means for receiving and holding.

32. (Original) The system according to claim 31, further comprising means for transporting the pharmaceutical containers in proximity to said means for receiving and holding.

33. (Original) The system according to claim 32, further comprising a means for viewing and determining the position of the pharmaceutical containers on said means for transporting.

34. (Original) The system according to claim 30, further comprising an arm that rotates to a first position to receive the cut portion of the pharmaceutical container, and a second position to place the cut portion in a waste repository.

35. (Currently Amended) The system according to claim 30, further comprising means for determining when the contents of the pharmaceutical container are no longer being emptied directly from the pharmaceutical container.

36. (Original) The system according to claim 30, further comprising means for detecting when the pharmaceutical container is no longer being held by said means for receiving and holding.

37. (Currently Amended) An automated system for emptying the contents of pharmaceutical containers, including medications, comprising:

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a gripper unit for receiving and holding a pharmaceutical container;

a cutter for cutting at least one of the top, sidewall, and bottom of the
pharmaceutical container; and

a control system for controlling the operation of said gripper unit and said
cutter.

38. (Original) The system according to claim 37, further comprising a
rotating unit, operable with said gripper and said control system, that rotates at least a
portion of said gripper unit to empty the contents of the pharmaceutical container.

39. (Original) The system according to claim 37, wherein said control
system comprises a keyboard, control logic, a display, and a processing unit.

40. (Original) The system according to claim 39, further comprising an
indicia reader that interfaces with said control system.

41. (Original) The system according to claim 40, wherein an indicia
associated with a pharmaceutical container is read by said indicia reader, and said
control system determining whether said pharmaceuticals are authorized.

42. (Original) The system according to claim 39, wherein said control
system receives identification information of an operator of the system.

43. (Original) The system according to claim 37, further comprising a
robot, interfacing with said control system, for placing the pharmaceutical container in
said gripper unit.

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44. (Original) The system according to claim 43, further comprising a vision system, utilized by said robot and interfacing with said control system, to determine the position of the pharmaceutical containers.

45. (Original) The system according to claim 37, wherein the contents of the pharmaceutical container are emptied into a bulk-up container.

46. (Original) The system according to claim 37, further comprising a rodless air cylinder that is used to facilitate movement of said cutter.

47. (Original) The system according to claim 37, further comprising an arm, interfacing with said control system, that rotates to a first position to receive a cut portion of the pharmaceutical container, and a second position to place the cut portion in a waste repository.

48. (Original) The system according to claim 47, wherein said arm utilizes a vacuum that retains the cut portion of said pharmaceutical bottle when said arm is in the first position, and the vacuum is reduced when said arm is in the second position to effect release of the cut portion.

49. (Original) The system according to claim 37, further comprising a scrap chute, controlled by said control system, that receives a portion of the pharmaceutical container subsequent to emptying the contents of the pharmaceutical container.

50. (Currently Amended) The system according to claim 37, further comprising a sensor system, interfacing with said control system, to determine when

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the contents of the pharmaceutical container are no longer being emptied directly from the pharmaceutical container.

51. (Original) The system according to claim 37, further comprising a detection system, interfacing with said control system, to detect when the pharmaceutical container is no longer being held by said gripper unit.

52 – 71. (Cancelled)

72. (Previously Presented) The system according to claim 1, further comprising a vision system for verifying that the pharmaceutical containers are at least one of the correct diameter and overhead shape.

73. (Previously Presented) The system according to claim 1, wherein when the pharmaceutical container is placed in the gripper unit any cotton can be removed with at least one of the cutting operation and a robot vacuum.

74. (Previously Presented) The system according to claim 1, further comprising a non-stick coating on the gripper unit.

75. (Previously Presented) The system according to claim 1, further comprising a pill accumulation chute.

76. (Currently Amended) The system according to claim 1, further comprising a light beam unit for verifying that the contents emptied directly from the pharmaceutical container.

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77. (Previously Presented) The system according to claim 30, further comprising a vision system for verifying that the pharmaceutical containers are at least one of the correct diameter and overhead shape.

78. (Previously Presented) The system according to claim 30, wherein when the pharmaceutical container is placed in the means for receiving and holding a pharmaceutical container any cotton can be removed with at least one of the means for cutting the pharmaceutical container and a robot vacuum.

79. (Previously Presented) The system according to claim 30, further comprising a non-stick coating on the means for receiving and holding the pharmaceutical container.

80. (Previously Presented) The system according to claim 30, further comprising a pill accumulation chute.

81. (Currently Amended) The system according to claim 30, further comprising a light beam unit for verifying that the contents emptied directly from the pharmaceutical container .

82. (Previously Presented) The system according to claim 37, further comprising a vision system for verifying that the pharmaceutical containers are at least one of the correct diameter and overhead shape.

83. (Previously Presented) The system according to claim 37, wherein when the pharmaceutical container is placed in the gripper unit any cotton can be removed with at least one of the cutting operation and a robot vacuum.

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84. (Previously Presented) The system according to claim 37, further comprising a non-stick coating on the gripper unit.

85. (Previously Presented) The system according to claim 37, further comprising a pill accumulation chute.

86. (Currently Amended) The system according to claim 37, further comprising a light beam unit for verifying that the contents emptied directly from the pharmaceutical container.

87. (Currently Amended) An automated system for emptying contents of pharmaceutical containers including medications, comprising:

a gripper unit for receiving and holding a pharmaceutical container;

a cutter for cutting at least one of the top, sidewall, and bottom of the pharmaceutical container and removing a portion therefrom forming an exit section in the container such that the contents are capable of exiting therefrom; and

rotating unit operable with said gripper unit that rotates at least a portion of said gripper unit to empty the contents of the pharmaceutical container and generates a rotational force responsive to said rotation to empty the contents therewith.

88. (Previously Presented) The system according to claim 87, further comprising a vision system for verifying that the pharmaceutical containers are at least one of the correct diameter and overhead shape.

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89. (Previously Presented) The system according to claim 87, wherein when the pharmaceutical container is placed in the gripper unit any cotton can be removed with at least one of the cutting operation and a robot vacuum.

90. (Previously Presented) The system according to claim 87, further comprising a non-stick coating on the gripper unit.

91. (Previously Presented) The system according to claim 87, further comprising a pill accumulation chute.

92. (Currently Amended) The system according to claim 87, further comprising a light beam unit for verifying that the contents emptied directly from the pharmaceutical container.

93 (New) An automated system for emptying contents of pharmaceutical containers including medications, comprising:

a gripper unit for receiving and holding a pharmaceutical container;

at least one of an ultrasonic cutter and a blade cutter for cutting the pharmaceutical container on at least one of the sidewall and bottom of the pharmaceutical container;

a rotating unit operable with said gripper unit that rotates at least a portion of said gripper unit to empty the contents of the pharmaceutical container;

a robot for placing the pharmaceutical container in said gripper unit;

a conveyor for transporting the pharmaceutical container in proximity to said robot;

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a vision system utilized by said robot to determine the position of the pharmaceutical container on said conveyor;

a sensor system to determine when the contents of the pharmaceutical container are no longer being emptied wherein said sensor system comprises a light emitter and a light receiver, said light emitter providing a light beam that is broken by the contents of the pharmaceutical container being directly emptied; and

a control system for controlling the operation of said gripper unit and said cutter and wherein said control system comprises a keyboard, control logic, a display, and a processing unit.

94. (New) The system according to claim 1, wherein the cutter cuts off at least one of the top and bottom of the pharmaceutical container.

95. (New) The system according to claim 30, wherein the means for cutting the pharmaceutical container cuts off at least one of the top and bottom of the pharmaceutical container.

96. (New) The system according to claim 37, wherein the cutter cuts off at least one of the top and bottom of the pharmaceutical container.

97. (New) The system according to claim 87, wherein the cutter cuts off at least one of the top and bottom of the pharmaceutical container.